

U.S. Patent Application No. 10/795,968
Amendment dated April 30, 2007
Reply to Office Action of October 30, 2006

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-35 (canceled)

36. (Previously presented) Niobium powder, wherein after sintering at a temperature of 1100°C for 10 minutes and anodized using a formation voltage of 20Vf at 60°C, has a capacitance of at least 65,000 CV/g and a DC leakage of less than 5.0 nA/CV.

37. (Previously presented) The niobium powder of claim 36, wherein said capacitance is from 65,000 to about 150,000 CV/g.

38. (Previously presented) The niobium powder of claim 36, wherein said capacitance is from about 75,000 to about 175,000 CV/g.

39. (Previously presented) The niobium powder of claim 36, wherein said capacitance is from about 100,000 to about 250,000 CV/g.

40. (Previously presented) The niobium powder of claim 36, wherein said capacitance is from about 125,000 to about 250,000 CV/g.

41. (Previously presented) The niobium powder of claim 36, wherein said capacitance is from about 100,000 to about 210,000 CV/g.

42. (Previously presented) The niobium powder of claim 36, wherein said DC leakage is from about 0.50 nA/CV to less than 5.0 nA/CV.

43. (Previously presented) The niobium powder of claim 36, wherein said niobium powder comprises flaked niobium powder.

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44. (Previously presented) The niobium powder of claim 36, wherein said niobium powder has a BET surface area of at least about $5.5 \text{ m}^2/\text{g}$.

45. (Previously presented) The niobium powder of claim 36, wherein said niobium powder has a BET surface area of at least about $7.0 \text{ m}^2/\text{g}$.

46. (Previously presented) The niobium powder of claim 36, wherein said niobium powder has a BET surface area of at least about $10 \text{ m}^2/\text{g}$.

47. (Previously presented) The niobium powder of claim 36, wherein said niobium powder has a BET surface area of from $6.0 \text{ m}^2/\text{g}$ to about $12 \text{ m}^2/\text{g}$.

48. (Previously presented) The niobium powder of claim 36, wherein said niobium powder has an oxygen content of less than 1,000 ppm.

49. (Previously presented) The niobium powder of claim 36, wherein said niobium powder has an oxygen content of from about 2,000 ppm to about 60,000 ppm.

50. (Previously presented) The niobium powder of claim 36, wherein said niobium powder is nitrogen doped.

51. (Previously presented) The niobium powder of claim 36, wherein said niobium powder has at least about 100 ppm of nitrogen present.

52. (Previously presented) The niobium powder of claim 36, wherein said niobium powder has nitrogen present in an amount of from about 100 ppm to about 5,000 ppm.

53. (Previously presented) The niobium powder of claim 36, wherein said niobium powder has a flow of at least about 80 mg/s.

54. (Previously presented) The niobium powder of claim 36, wherein said niobium powder has a flow of from about 80 to about 500 mg/s.

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55. (Previously presented) The niobium powder of claim 36, wherein said niobium powder has a Scott Density of about 35 g/in³ or less.

56. (Previously presented) The niobium powder of claim 36, wherein said niobium powder has a Scott Density of from about 10 to about 35 g/in³.

57. (Previously presented) The niobium powder of claim 36, wherein said niobium powder has a particle size of from 5 to 80 microns.

58. (Previously presented) The niobium powder of claim 36, wherein said niobium powder has an aspect ratio of from about 3 to about 300.

59. (Previously presented) The niobium powder of claim 36, wherein said niobium powder comprises agglomerated niobium powder.

60. (Previously presented) The niobium powder of claim 36, wherein said niobium powder is an agglomerated powder.

61. (Previously presented) The niobium powder of claim 36, wherein said niobium powder has a Scott Density of about 35 g/in³ or less, and a flow of at least about 80 mg/s.

62. (Previously presented) The niobium powder of claim 61, wherein said niobium powder has a particle size of from 5 to 80 microns.

63. (Previously presented) The niobium powder of claim 62, wherein said niobium powder has an aspect ratio of from about 3 to about 300.

64. (Previously presented) The niobium powder of claim 62, wherein said niobium powder is agglomerated.

65. (New) Niobium powder, wherein after sintering at a temperature of 1100°C for 10 minutes and anodized using a formation voltage of 35Vf at 60°C, has a capacitance of at least 65,000 CV/g and a DC leakage of less than 5.0 nA/CV.